Foundation Scholarships: Hough, Christ's Hospital (£80); Pocklington, Yorkshire College (£80); Chevalier, Cowper Street School (£60); Rosenberg, private tuition (£50). Exhibitions: Morton, Queen's College, Belfast (£70); Franks, Coatham School, Redcar (£50); Le Sueur, University College, Aberystwith (£33⅓). Sizarships: Cummings, Henderson, Dale, Legg.

SCIENTIFIC SERIALS.

We have received a new instalment of the current volume of the Annals of the Moscow Observatory (series ii. vol. i. fasc. 2), published in French and German by Prof. Bredichin. It contains four papers, by the editor, on the comets of 1886 and 1887 I.; the results of M. Bélopolsky's observations of the last total solar eclipse at Yurievets, with interesting reproductions of photographs of the corona, and remarks upon the movements on the surface of the sun; photoheliographic observations made in 1885, by the same author; photometric observations, by W. Ceraski; and a paper on the rotation of the red spot in Jupiter, by P. Sternberg. All published observations which were made in Europe and the States from 1879 to February 1888 are given, and the conclusion is, that the spot did not change its position in 1879 and 1880, but has changed it by 0·0893h. since 1880–81, which change cannot be explained by mere variations of its shape.

The last volume of the *Mémoires* of the Kharkoff Society of Naturalists contains a very full list of vascular plants in the neighbourhood of Voronezh, by L. Gruner. The names of 778 species are given, but, the aquatic plants being still only imperfectly known, the Voronezh flora will probably include more than 800 species of Phanerogams.—The *Mastigophoræ* and *Rhizopodæ* of the salt lakes of Slavyansk are described by M. Vysotski; the *Chlorosporæ* of Kharkoff, by M. Alexeénko; and the *Chrysididæ* and *Tenthredinidæ* of Kharkoff, by Prof. Jarochewsky.

Journal of the Russian Chemical and Physical Society, vol. xx. fasc. 7. — Full reports on the eclipse of the sun of August 19, 1887 (continued). The reports of the various observations at Krasnoyarsk are given in full.—Notes on the action of acids, the tertiary acetate of amyl, and on the combinations of amylene with acids, by D. Konovaloff.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, December 6.—"On *Thylacopardus australis*, Owen. By Sir Richard Owen, F.R.S.

This paper, illustrated by drawings of the natural size, was descriptive of a skull discovered in one of several small caverns at a depth of 80 feet from the surface, in New South Wales. The essential characters of the dentition were those of the feline mammals, save that the piercing and killing teeth were the foremost pair of incisors; the work of molars was mainly done by a single large trenchant or sectorial tooth on each side of both jaws. This tooth was followed by a small tubercular molar in close contact therewith, and by a second similar molar with an intervening vacancy. The latter character is that by which the present fossil differs from the Australian one described in the author's work "The Extinct Mammals of Australia," 2 vols. quarto, 1877. The largest carnivorous kind, equalling the lion in size, bears the name of *Thylacoleo*; the skull of the present fossil shows that a Carnivore of the size of a leopard formerly, also, roamed over the land of kangaroos. These, being the largest native quadrupeds seen by Banks and Captain Cook, were described by Dr. Shaw under the name of *Macropus major*.

Anthropological Institute, December 11.—Francis Galton, F.R.S., President, in the chair.—Dr. J. G. Garson exhibited a new form of anthropometric instrument, specially designed for the use of travellers.—Dr. R. H. Codrington read a paper on social regulations in Melanesia. The part of Melanesia in view comprised the Northern New Hebrides, the Banks's Islands, Sta. Cruz, and the South-Eastern Solomon Islands. The social regulations which obtain among the people were described from personal observation, and from information given by natives. A considerable portion of the whole subject was thus in view, and with particular differences there is a general agreement, from which a wider likeness throughout the Melanesian population may be inferred. The social regulations dealt with were only those relating (I.) to *Marriage*, and (II.) to *Property*. *I. Social Regulations relating to Marriage.* (1) The entire arrangement of society depends on the division of the whole people, in every settlement, large or small, into two or more classes, which are exogamous, and in which descent follows the mother. This division comes first of all things in native thought, and all social arrangements are founded upon it. A woman regards mankind as divided into husbands and brothers; a man regards womankind as divided into wives and sisters—at least, on about the same level of descent. (2) The members of these divisions are all intermixed in habitation, property, subordination to a chief, and in the well-understood relationship through the father; the divisions, therefore, are not tribes. (3) Examples from two regions—(*a*) where these divisions are two, as in the Banks's Islands and Northern New Hebrides; (*b*) where there are more than two, as in Florida, in the Solomon Islands. (*a*) 1. Where there are two divisions there is no name to either. In Mota there are two *veve* (distinction); in Lepers' Island two *wai-vung* (bunch of fruit). 2. The divisions are strictly exogamous; irregular intercourse between members of the same is a heinous crime; avoidance of the person and name of father-in-law, &c., is the custom. 3. No communal marriage in practice, or tradition of it; yet a latent consciousness of the meaning of the words used for husband and wife, mother, &c. The story of Qat shows individual marriage. The levirate, and practice of giving a wife to set up a nephew in the world. 4. Descent through the mother makes the close relation of sister's son and mother's brother; the son takes his mother's place in the family pedigree. Certain rights of the sister's son with his uncle. The mother is in no sense head of the family. The bridegroom takes his bride into his father's house, if not into his own. 5. A certain practice of *couvade* prevails. 6. No capture in marriage. Adoption of no importance. (*b*) 1. In Florida, in the Solomon Islands, and the neighbourhood, is found an example of four or six divisions, called *kema*. In strict exogamy, descent following the mother, and local and political intermixture, all is the same as in the Banks's Islands. But each *kema* has its name, and each has its *buto*, that which the members of it must abstain from. The names are some local, some taken from living creatures. The *buto* is mostly something that must not be eaten. 2. Question whether totems are present. The bird which gives its name to one *kema* is not the *buto* of it, can be eaten. Comparison from the Island of Ulawa. 4. Exceptional condition of part of Malanta and San Cristoval, in the apparent absence of exogamous divisions of the people, and in descent being counted through the father. *II. Property and Succession.* *A.* 1. Land is everywhere divided into (1) the town; (2) the gardens; (3) the bush. Of these, the first two are held in property, the third is unappropriated. 2. Land is not held in common, *i.e.* each individual knows his own; yet it is rather possession and use for the time being of what belongs to the family, and not to the individual. A chief has no more property in the land than any other man. Sale of land was very rare before Europeans came; and sale of land by a chief beyond his own piece, no true sale. Example at Saa of the fixed native right of property in land. Abundance makes land of little value. 3. Land reclaimed from the bush by an individual, and the site of a town founded on the garden ground of an individual, has a character of its own. 4. Fruit-trees planted by one man on another's land remain the property of the planter and his heirs. In a true sale the accurate and particular knowledge of property in land and trees is remarkably shown. 5. Personal property is in money, pigs, canoes, ornaments, &c. *B.* 1. The regular succession to property is that by which it passes to the sister's son, or to others who are of kin through the mother. 2. But that which a man has acquired for himself he may leave to his sons, or his sons and their heirs may claim. This is the source of many quarrels, the character of a piece of land being forgotten, or disputed by the father's kin. 3. Hence a tendency to succession to the father's property by his sons follows on the assertion of paternity, and the occupation of new ground. 4. A man's kin still hold a claim on his personal property, but his sons, who are not his kin, will generally obtain it.—In the absence of the author, Dr. Edward B. Tylor read a paper by Mr. A. W. Howitt on Australian message sticks and messengers. The use of message sticks is not universal in Australian tribes, and the degree of perfection reached in conveying informarion by them differs much. Some tribes, such as the Dieri, do not use the message stick at all, but make use of emblematical tokens, such as the net carried

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by the *pinya*, an armed party detailed by the council of headmen of the tribe to execute its sentences upon offenders. Other tribes, such as the Kurnai, use pieces of wood without any markings. Others, again, especially in Eastern Queensland, use message sticks extensively, which are often elaborately marked, highly ornamented, and even brightly painted. No messenger, who was known to be such, was ever injured. The message stick was made by the sender, and was kept by the recipient of the message as a reminder of what he had to do. For friendly meetings the messenger of Kurnai, of Gippsland, carried a man's kilt and a woman's apron hung on a reed; but for meetings to settle quarrels or grievances by a set fight, or for hostile purposes generally, the kilt was hung upon the point of a spear. Among the Wotjoballŭk of the Wimmera River in Victoria, the principal man among them prepares a message stick by making certain notches upon it with a knife. The man who is to be charged with the message looks on, and thus learns the connection between the marks upon the stick and his message. A notch is made at one end to indicate the sender, and probably notches also for those who join him in sending the message. If all the people of a tribe are invited to attend a meeting, the stick is notched from end to end; if part only are invited, then a portion only of the stick is notched; and if very few people are invited to meet or referred to in the verbal message, then a notch is made for each individual as he is named to the messenger. The messenger carried the stick in a net-bag, and on arriving at the camp to which he was sent, he handed it to the headman at some place apart from the others, saying to him, "So-and-so sends you this," and he then gives his message, referring, as he does so, to the marks on the message stick. The author gives an explanation of the method adopted for indicating numbers, which fully disposes of the idea that the paucity of numerals in the languages of the Australian tribes arises from any inability to conceive of more numbers than two, three, or four. A messenger of death painted his face with pipe-clay when he set out, but did not in this tribe carry any emblematical token. Among the Wirajuri of New South Wales, when the message was one calling the people together for initiation ceremonies, the messenger carried a "bull-roarer," a man's belt, a man's kilt, a bead string, and a white head band, in addition to the message stick. In New South Wales, the Kaiabara tribe use message sticks cut in the form of a boomerang, to one end of which a shell is tied. As a rule the notches on a message stick are only reminders to the messenger of the message he is instructed to deliver, and are unintelligible to a man to whom they have not been explained; but certain notches appear to have a definite meaning and to indicate different classes; and among the Adjadura there is an approach to a fixed rule, according to which these sticks are marked, so that they would convey a certain amount of meaning definitely to an Adjadura headman independently of any verbal message.

Mathematical Society, December 13.—J. J. Walker, F.R.S., President, in the chair.—Dr. Glaisher, F.R.S., communicated a geometrical note by Mr. H. M. Taylor.—Mr. Love read a paper on the equilibrium of a thin elastic spherical bowl.—The President (Prof. Greenhill, F.R.S., in the chair) contributed some illustrations of a former paper on a method in the analysis of ternary forms.—The Secretary read an abstract of a paper on a method of transformation with the aid of congruences of a particular type, by Mr. J. Brill.

EDINBURGH.

Royal Society, December 3.—Sir Douglas Maclagan, Vice-President, in the chair.—The Chairman gave an opening address.—Dr. John Murray communicated a paper by Mr. H. B. Brady on the Ostracoda collected in the South Sea Islands. One fresh-water specimen obtained in New Zealand is described. The rest were collected between the tide-marks or at depths of not more than 6 fathoms. The internal structure is not described, as the specimens were preserved in the dry state. Fifty new species and two new genera occur.—Dr. Murray communicated also a paper by Dr. O. von Linstow on *Pseudalius alatus*, Leuck., collected by Mr. Robert Gray in the Arctic Seas, and other species of the genus. A detailed description of this Entozoon is given, it having been only once previously described, and that imperfectly. Six other species of the same genus are described —Prof. Patrick Geddes read the first part (botanical and zoological) of a restatement of the theory of organic evolution. He drew attention to the two tendencies—vegetative and reproductive—which exist in organic nature, and asserted that evolution is the result of the universal subordination of the former to the latter.

STOCKHOLM.

Royal Academy of Sciences, December 12.—Contributions to our knowledge of the habits of solitary wasps, by Prof. Chr. Aurivillius.—On the singular points of such functions as are defined by non-linear differential equations, by Prof. Mittag-Leffler.—On the influence of the woods on the climate of Sweden, by Dr. Hamberg.—Singular generatrices in algebraic rule surfaces, by Prof. Björling.—On the systematic value of the varieties of herring, by Prof. F. A. Smitt.—On dinitro-naphthalin-sulphon acid and some of its derivatives, by Herr P. Hellström.—On naphthoë acids, by Dr. Ekstrand.—On the action of fuming sulphuric acid on amido-naphthalin-sulphon acids, by Herr Forsling.—On the structure of the auricles in the Echinococonidæ, by Prof. S. Lovén.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Puff: Mrs. Macquoid (S.P.C.K.).—Rides and Studies in the Canary Islands: C. Edwardes (Unwin).—Elementos de Estatika Grafica: J. Schloske, traducidos del Alemán por V. Balbin (Buenos Aires).—Tratado de Geometria Analitica: J. Casey; traducido del Inglés por V. Balbin (Buenos Aires).—Carl von Linné's Ungdomsskrifter, 1, 2 (Stockholm).—*Challenger* Report—Zoology, vol. xxviii. (Eyre and Spottiswoode).—Elementary Building Construction and Drawing: E. J. Burrell (Longmans).—Atlas of Chemistry, part 1: V. V. Branford (Edinburgh, Livingstone).—Visitors' Guide to Salem (Salem, Mass.).—Bibliography of Astronomy for the Year 1887: W. C. Winlock (Washington).—The Beginning of American Science—The Third Century: G. Browne Goode (Washington).—On the Variation of Decomposition in the Iron Pyrites, 2 parts: A. A. Julien.—Journal of the Royal Microscopical Society, December (Williams and Norgate).—Essex Institute Historical Collections, vol. xxiv., January to December 1887 (Salem, Mass.).—Botanische Jahrbücher für Systematik Pflanzengeschichte, und Pflanzengeographie, Zehnter Band, iv. Heft (Williams and Norgate).—Journal and Proceedings of the Royal Society of New South Wales, vol. xxii. part 1 (Trübner).—Beiblätter zu den Annalen der Physik und Chemie, 1888, No. 11 (Leipzig).—Transactions of the Leicester Literary and Philosophical Society, October (Leicester).—The Encyclopædic Dictionary, vol. vii. part 2 (Cassell).—Catalogue of the Marsupialia and Monotremata in the Collection of the British Museum, Natural History (O. Thomas, London).—Die Mechanik in Ihrer Entwickelung: Dr. E. Mach (Brockhaus, Leipzig).—Year-book of Pharmacy, 1888 (Churchill).—Les Stations de l'Age du Renne, fasc. 1 (Baillière et Fils, Paris).—Prace Matemalyczno-Fizyezue, tom. i. (Warszawa).

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